

Amendments to the Drawings

The attached drawing sheet includes a change to Figure 4. This sheet replaces the original drawing sheet including Figure 4.

Remarks and Arguments

Claims 1-14 and 17-23 were allowed.

The drawings were objected to and the remaining claims 24-25 and 28-31 were rejected for obviousness.

In this amendment, Applicant has cancelled claim 24 and amended claim 28. Support for the amendment to claim 28 is found at page 6, third full paragraph and page 7, last sentence of the second full bullet point.

Response to Drawing Objections

First, Applicant respectfully asserts that, other than adding a reference number to Fig. 4 (for the cavity 25) and amending the specification at page 13 to add reference numbers 25, 29, 30 as described below, no amendment to the drawings is required because the claimed features are already described in the specification and existing drawings.

In claim 1 “a structure for spatially and/or spectrally narrowing light emission from at least one of the regions of light-emissive material, the structure comprising an interference structure, a cavity structure and/or a microcavity structure” is described in the specification on page 13, second full paragraph, on page 5, last paragraph to page 6, first paragraph, and in original claims 16-17, and is shown in the embodiment set forth in the present drawings as the spacing between the anode (30-34) and cathode (29) electrodes on either side of the emissive material (23-27) defining the ends of the cavity (see Fig. 4). More specifically, at page 13, second full paragraph the specification recites:

It may be desirable to sharpen spatially the emission from one or more of the emissive regions to improve the effect of the display. One efficient way to achieve this is by defining a resonant cavity within the device which can spatially and/or spectrally narrow the emission by means of interference and/or cavity effects. One particularly efficient way of implementing such a cavity is by integrating the emissive

material itself into such a cavity 25, with (for instance) the spacing between the anode 30 and cathode 29 electrodes on either side of the emissive material defining the ends of the cavity. Additional layers such as dielectric stacks could be provided to define some or all of the cavity. The cavity itself could be augmented by the thickness of the organic layers.

Thus, the objection to the drawings is believed to be overcome.

Response to Obviousness Rejections

In claims 24-25, "a light switching unit" is already described in the specification and shown in the drawings, for example at page 6, second full paragraph which recites:

"The light switching unit is suitably a liquid crystal unit. The array of pixels may be an orthogonal array."

and at page 13, third full paragraph:

"The LCD unit is a conventional passive matrix LCD unit. Any suitable type of LCD unit could be used, including ferroelectric, TN and STN types. It will be appreciated that liquid crystal displays are just one class of light-switching devices that could be used in relation to the present invention and that other suitable devices could be used instead."

and in original claim 19:

"...wherein the light switching unit is a liquid crystal unit."

and at page 8, third full paragraph:

"The device of figures 3 and 4 is a three-color backlit LCD display device. The device comprises a planar backlight unit 20 and a planar LCD unit 21."

Thus, the objection to the drawings is believed to be overcome.

Amended claims 28-31 and claim 25 are believed patentable over the cited references for at least the following reasons.

Claim 25 is novel over the cited prior art because the art does not explicitly disclose Applicant's claimed series of grooves, in combination with Applicant's claimed depositing by means of ink-jetting in some of the grooves a linear region of organic light-emissive material. The advantage of providing grooves is that they help to improve the accuracy of the deposition of the light-emissive material, i.e., by ink-jetting. Where May fails to explicitly disclose grooves, and as the Examiner admits, May does not disclose linear regions of organic light-emissive material, and as the Examiner further admits, May fails to teach that the light-emissive groove is deposited by means of ink-jetting, there is no teaching or suggestion in the primary reference of the method of Applicant's claim 25.

Nor do the secondary references cure the deficiencies of the primary reference. There is no teaching or suggestion in the art, other than an attempt at hindsight reconstruction, to support an allegation that Mark's method of depositing an organic light-emissive material be substituted with May's backlight "because this will allow an efficient backlight which provide an expensive full color display system." Again, this is not a teaching of Applicant's claimed grooves; there is no teaching in the art to provide grooves to help improve the accuracy of the deposition of the light-emissive material, i.e., by ink-jet printing, as claimed by Applicant. Still further, there is no motivation or teaching to further combine Hideto with May and Mark, other than an attempt at hindsight reconstruction, nor any teaching that the combination is obvious is alleged because "this will change the arrangement of the interval of the color filter elements and change of arrangement of the filter elements, due to temperature change which cause white emissions in the filter element." It is not clear how this alleged motivation is either relevant to or suggested in the prior art of record. Again, Hideto does not teach the use of an organic light-emissive material in a display device of the type recited in Applicant's claim 25. Thus, Applicant respectfully asserts that claim 25 patentably distinguishes over the prior art of reference.

Amended claim 28 is also patentable over the cited references. The primary reference does not disclose forming a region of organic light-emissive material by ink-jet printing (as admitted by the Examiner), nor forming such light-emissive region by ink-jet printing of a solution processable small molecule material. Nor do the secondary

references cure the deficiencies of the primary reference for the reasons described above. Thus, amended claim 28, and claims 29-31 depending therefrom, are believed to be patentable over the prior art of record.

RECONSIDERATION

It is believed that all claims of the present application are now in condition for allowance.

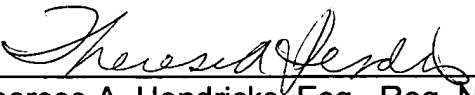
Reconsideration of this application is respectfully requested. If the Examiner believes that a teleconference would expedite prosecution of the present application the Examiner is invited to call the Applicant's undersigned attorney at the Examiner's earliest convenience.

Any amendments or cancellation or submissions with respect to the claims herein is made without prejudice and is not an admission that said canceled or amended or otherwise affected subject matter is not patentable. Applicant reserves the right to pursue canceled or amended subject matter in one or more continuation, divisional or continuation-in-part applications.

To the extent that Applicant has not addressed one or more assertions of the Examiner because the foregoing response is sufficient, this is not an admission by Applicant as to the accuracy of such assertions.

Please grant any extensions of time required to enter this response and charge any fees in addition to fees submitted herewith that may be required to enter/allow this response and any accompanying papers to our deposit account 02-3038 and credit any overpayments thereto.

Respectfully submitted,


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Attachment: replacement drawing sheet